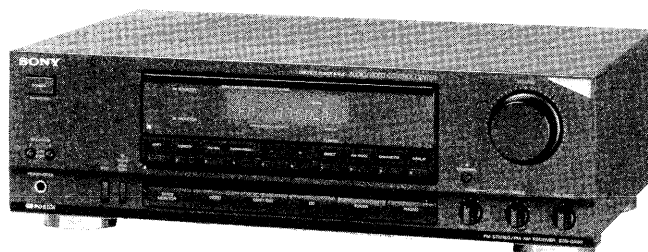


# STR-GX311

## SERVICE MANUAL

*AEP Model*



**R·D·SEON**

### SPECIFICATIONS

#### Amplifier section

	Model for Scandinavian countries, Switzerland, Spain and Portugal	Model for other countries
DIN, 1 kHz	60 W + 60 W (8 ohms)	70 W + 70 W (4 ohms) 60 W + 60 W (8 ohms)
20 Hz - 20 kHz THD 0.3 %	40 W + 40 W (8 ohms)	50 W + 50 W (4 ohms) 40 W + 40 W (8 ohms)

Harmonic distortion

Less than 0.8% at rated output

Frequency response

PHONO: RIAA equalization curve  $\pm 0.5$  dB

CD

VIDEO

TAPE

10 Hz - 50 kHz  $\begin{matrix} +0 \\ -3 \end{matrix}$  dB

#### Inputs

	Sensitivity	Impedance	S/N (weighting network, input level)
PHONO	2.5 mV	50 kilohms	74 dB
CD, VIDEO TAPE 1, 2	200 mV	50 kilohms	95 dB

#### Outputs

REC OUT, VIDEO (AUDIO) OUT	Voltage 200 mV Impedance 10 kilohms
SPEAKER A, B	Accepts speakers of 8-16 ohms
HEADPHONES	Accepts low and high impedance headphones

#### Tone controls

BASS:  $\pm 10$  dB at 100 Hz

TREBLE:  $\pm 10$  dB at 10 kHz

#### Loudness

+6 dB (100 Hz)

— Continued on next page —

**FM STEREO/FM-AM RECEIVER**  
**SONY®**

## Tuner section

	FM tuner section	AM tuner section
Tuning range	87.5 – 108 MHz	531 – 1602 kHz
Antenna	75 ohms, unbalanced	External antenna terminal
Sensitivity at 50 dB quieting	18.3 dBf, 2.2 $\mu$ V (mono) 40 dBf, 24.5 $\mu$ V (stereo)	—
Usable sensitivity	11.2 dBf, 1 $\mu$ V (IHF)	Loop antenna: 300 $\mu$ V (at 999 kHz)
Signal-to-noise ratio	70 dB (mono) 66 dB (stereo)	54 dB (at 50 mV/m)
Harmonic distortion	0.3% (mono), 0.5% (stereo) at 1 kHz	0.5% (at 50 mV/m, 400 Hz)
Selectivity	60 dB at 400 kHz	30 dB at 10 kHz
Separation	45 dB at 1 kHz	—
Frequency response	30 Hz — 15 kHz $\pm 0.5$ dB	—

## General

### System

Tuner section: PLL quartz-locked digital synthesizer system

Preamplifier section: low-noise NF type equalizer amp

Power amplifier section: pure complementary SEPP

### Power requirements

220 – 230 V AC, 50/60 Hz

### Power consumption

Model for Scandinavian countries, Switzerland, Spain and

Portugal: 110 W

Model for other countries: 160 W

### AC outlet

One switched (100 W Max.)

### Dimensions

Approx. 430 x 135 x 305 mm (w/h/d)

(17 x 5  $\frac{3}{8}$  x 11  $\frac{7}{8}$  inches)

including projecting parts and controls

### Weight :

Approx. 6.2 kg (13 lb 1 oz)

### Accessories supplied

FM wire antenna (1)

AM loop antenna (1)

Remote Commander RM-S103 (1)

Sony batteries SUM-3(NS) (2)

Design and specifications are subject to change without notice.

## Note

This appliance conforms with EEC Directive 87/308/EEC regarding interference suppression.

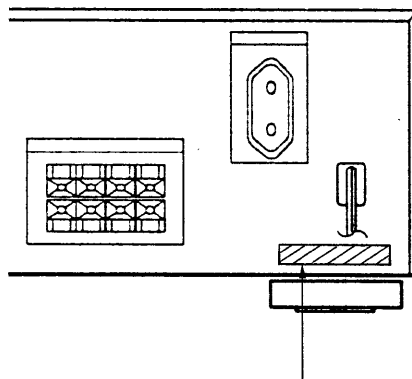
## SAFETY-RELATED COMPONENT WARNING!!

**COMPONENTS IDENTIFIED BY MARK  $\triangle$  OR DOTTED LINE WITH MARK  $\triangle$  ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.**

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Section	Title	Page
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SECTION 2.	ELECTRICAL ADJUSTMENTS .....	4
SECTION 3.	IC PIN FUNCTIONS .....	5
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SECTION 6.	ELECTRICAL PARTS LIST .....	29

## MODEL IDENTIFICATION — BACK PANEL —



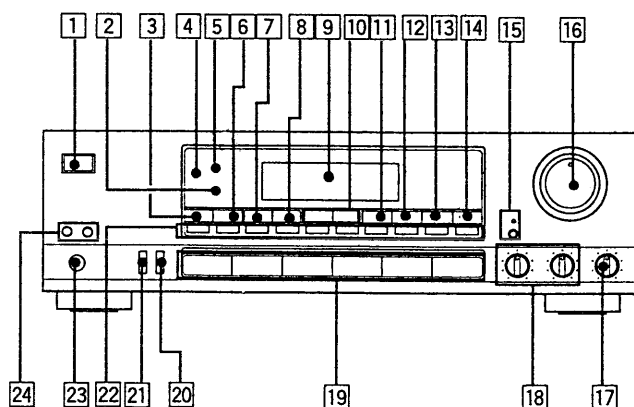
4-957-709-1□ AE2 (AEP2) : Scandinavian countries, Switzerland,  
Spain and Portugal  
4-957-709-0□ AE1 (AEP1) : Other European countries  
4-957-709-2□ G : German model

## SECTION 1 GENERAL

This section is extracted from instruction manual.

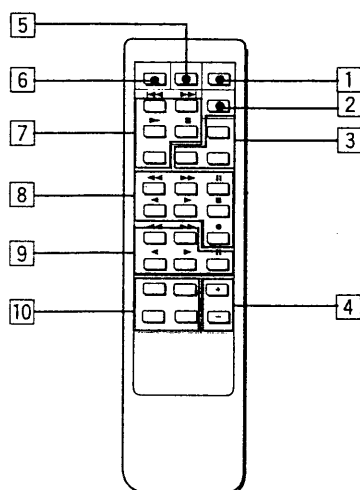
### Identifying Parts and Controls

STR-GX311



#### Front Panel

- 1 POWER switch
- 2 MONITOR indicator (page 58.)
- 3 SHIFT button (pages 40 and 42.)
- 4 Remote sensor
- 5 STANDBY indicator  
The STANDBY indicator lights up when the power cord is connected.
- 6 MEMORY button (pages 30 and 40.)
- 7 BAND button (pages 34 and 38.)
- 8 TUNING/PRESET button (pages 38 and 44.)
- 9 Display window
- 10 +/- buttons (pages 38 and 44.)
- 11 TUNING DIRECT button (page 34.)
- 12 FM MODE button (page 36.)
- 13 CHARACTER button (page 30.)
- 14 DISPLAY button (pages 34 and 52.)
- 15 LOUDNESS button and indicator (page 26.)
- 16 VOLUME control (page 26.)
- 17 BALANCE control (page 26.)
- 18 BASS/TREBLE controls (page 26.)
- 19 Function selectors  
When the TAPE 2 MONITOR is pressed, the indicator of the last selected function also remains lit. But the TAPE 2 MONITOR button has priority and the taped or digital audio taped program can be heard.
- 20 EON (TA-NEWS-INFO) button (page 54.)
- 21 PTY button (page 56.)
- 22 Numeric buttons (pages 34, 40 and 42.)
- 23 HEADPHONES jack (page 26.)
- 24 SPEAKERS A/B buttons (page 26.)




#### Remote Commander RM-S103

- 1 POWER button
- 2 DBFB button\*
- 3 TUNER PRESET +/- and SHIFT buttons
- 4 VOLUME +/- buttons
- 5 SURROUND button\*
- 6 MUTE button\*
- 7 CD player operation buttons  
D. (disc) SKIP: When your CD player is equipped with a multi-disc changer, use this button to select loaded disc.  
CD ►: Selects the CD function and starts CD playback.
- 8 DECK B operation buttons (also for single tape deck)  
DECK B ◀▶: Select tape function and start tape playback on deck B.  
◀◀▶▶: Fast winding  
⏸: Pause  
■: Stop  
●: Recording
- 9 DECK A operation buttons  
DECK A ◀▶: Select tape function and start tape playback on deck A.  
◀◀▶▶: Fast winding  
⏸: Pause
- 10 Function select buttons  
When one of these buttons is pressed in the STANDBY mode, the power is turned on automatically.

\* These buttons does not function for the unit.

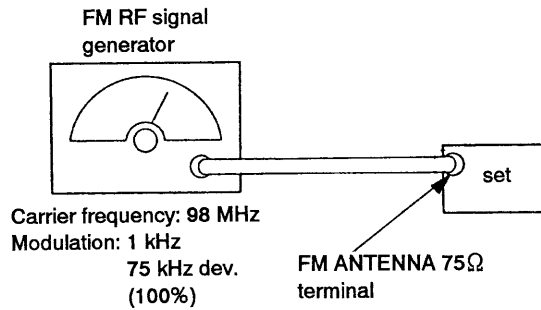
#### Note on the remote commander

For the functions other than the receiver's own ones, the remote commander is effective only with Sony components having a remote sensor with a  mark.

## SECTION 2 ELECTRICAL ADJUSTMENTS

### • FM Signal Level Display Adjustment

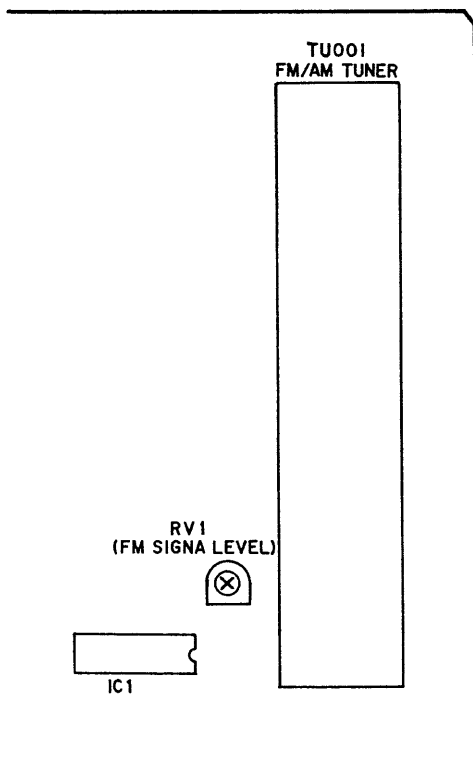
Setting:



### Procedure:

1. Tune the set to 98 MHz.
2. Apply 80 dB $\mu$ , 98 MHz signal to the FM antenna terminal.
3. Press the DISPLAY button of the unit to indicate the signal level.
4. Adjust RV1 so that signal level indication is changed from SIG 71 dB to SIG 75 dB.
5. Apply 81 dB $\mu$ , 98 MHz signal to the FM antenna terminal.
6. Make sure that the signal level indication is SIG75dB. If not, repeat step 2 to 6.

[MAIN BOARD] (COMPONENT SIDE)



## SECTION 3

### IC PIN FUNCTIONS

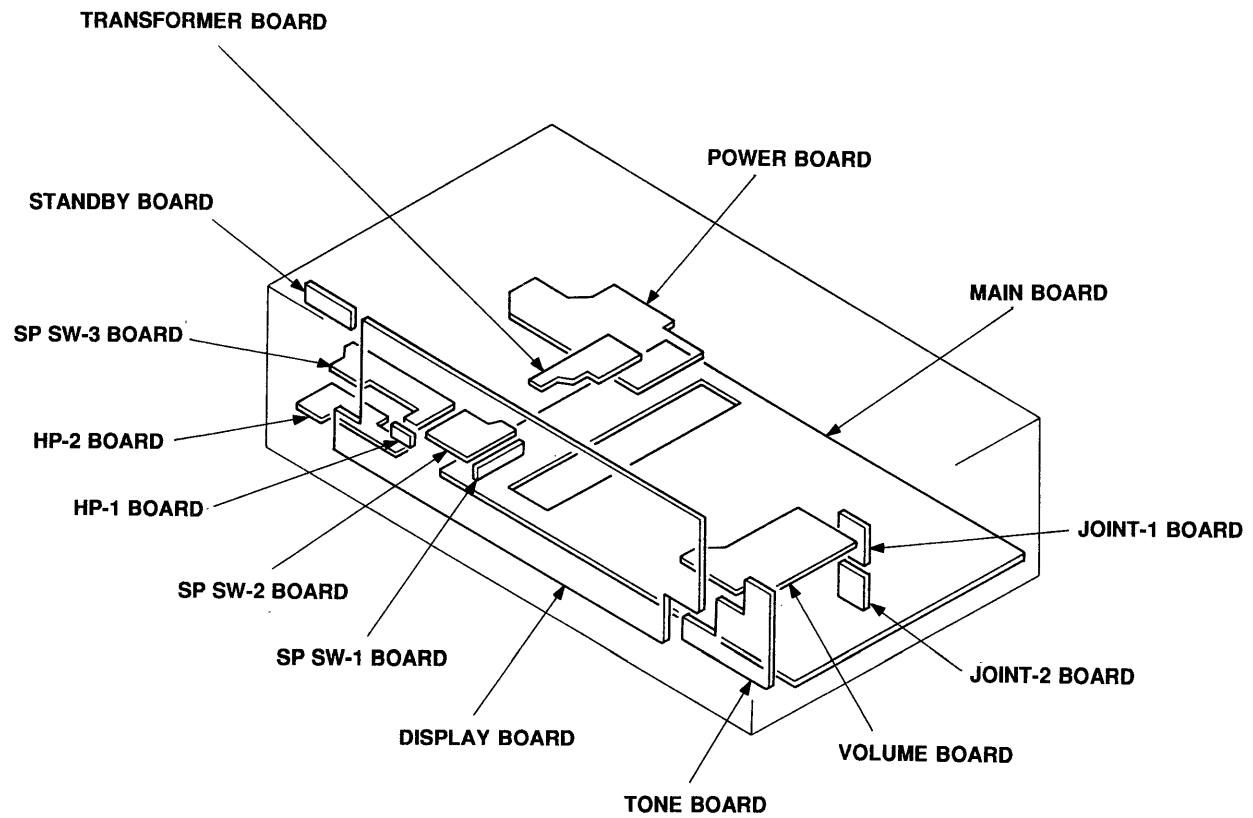
#### IC300 SYSTEM CONTROL IC ( $\mu$ PD78043GF-044-3B9)

PIN No.	I/O	PIN NAME	FUNCTION
1	O	7G	Drives indicator tube.
2	O	6G	Drives indicator tube.
3	O	5G	Drives indicator tube.
4	O	4G	Drives indicator tube.
5	O	3G	Drives indicator tube.
6	O	2G	Drives indicator tube.
7	O	1G	Drives indicator tube.
8	—	VDD	5V
9	I	RDS-CLOCK	RDS CLOCK input.
10		NC	
11	I	RDS-DATA	RDS DATA input.
12	O	RDS-RESET	RESET output for LC7073M.
13	O	LATCH	} FUNCTION output for tuner.
14	O	CLOCK	
15	O	DATA	
16		IF-D	IF COUNT DATA input.
17	I	RESET	System RESET input.
18	I	A-STOP	TUNED input.
19	I	STEREO	"L" when STEREO is received.
20	—	GND	
21	I	POWER IN	POWER ON/OFF input.
22	I	FUNC SEL	Fixed "H".
23	I	FUN 2	Input for detecting motor FUNCTION position.
24	I	FUN 1	Input for detecting motor FUNCTION position.
25	I	FUN 0	Input for detecting motor FUNCTION position.
26	I	SIGNAL	SIGNAL input.
27	I	KEY 1	KEY input port.
28	I	KEY 0	KEY input port.
29	—	A/D VDD	A/D converter power supply.
30	I	A/D REF	A/D converter power supply reference voltage.
31	—	GND	
32		NC	
33	—	GND	
34	I	X1	Oscillation signal input (4.19MHz).
35	O	X2	Oscillation signal output (4.19MHz).
36	O	FUN CCW	Operates the motor for motor FUNCTION.
37	O	FUN CW	Operates the motor for motor FUNCTION.
38	O	VOL-	Motor for VOL. "H" when DOWN.
39	O	VOL+	Motor for VOL. "H" when UP.
40	—	GND	

PIN No.	I/O	PIN NAME	FUNCTION
41	O	T-MUT	TUNER MUTE output.
42	O	P-MUT	PROTECT MUTE output.
43	O	F-MUT	FUNCTION MUTE output.
44	I	PROTECT IN	PROTECT detection input.
45	I	RDS-START	RDS DATA START pin.
46	I	R-IN	Remote commander input.
47	I	STOP	Power ON/OFF Monitor.
48		NC	Fixed "L".
49		SP-RY	Activates SPEAKER RELAY.
50	O	POWER RY	Activates POWER RELAY.
51	I	RDS-ID	RDS-ID detection input.
52	—	V <sub>DD</sub>	5V
53	O	STANBY	Activates standby LED.
54	O	VOL-LED	Activates VOL-LED.
55	O	TAPE2-RELAY	Activates TAPE 2 relay.
56	O	S-DIRECT-RELAY	Activates source direct relay.
57	—	GND	
58	—	GND	
59	—	GND	
60	—	GND	
61		LOUDNESS	LOUDNESS CONTROL output.
62	O	P15	Drives indicator tube.
63	O	P14	Drives indicator tube.
64	O	P13	Drives indicator tube.
65	O	P12	Drives indicator tube.
66	O	P11	Drives indicator tube.
67	O	P10	Drives indicator tube.
68	O	P9	Drives indicator tube.
69	O	P8	Drives indicator tube.
70	O	P7	Drives indicator tube.
71	—	— 24V	— 24V
72	O	P6	Drives indicator tube.
73	O	P5	Drives indicator tube.
74	O	P4	Drives indicator tube.
75	O	P3	Drives indicator tube.
76	O	P2	Drives indicator tube.
77	O	P1	Drives indicator tube.
78	O	10G	Drives indicator tube.
79	O	9G	Drives indicator tube.
80	O	8G	Drives indicator tube.

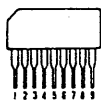
## SECTION 4 DIAGRAMS

### 4-1. CIRCUIT BOARDS LOCATION

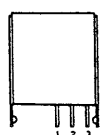


## 4-2. SEMICONDUCTOR LEAD LAYOUTS

**BA6208**  
**uPC4570HA-1**

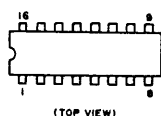


**GP1U58XB**

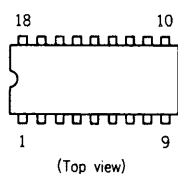


1 Vout  
2 Vcc  
3 GND

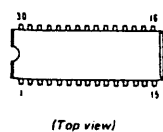
**LA1235**  
**SAA6579**



**LC7073**



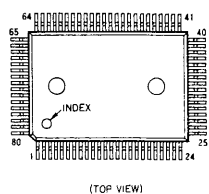
**LC7822**



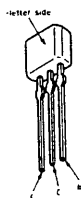
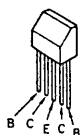
**M5218AL**



**uPD78043GF-044-3B9**



DTA124ES  
DTC114TS  
2SA1175-HFE  
2SC2785-HFE  
2SC3623A-LK

**DTC124ES****2SA979-FG**

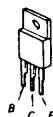
**2SA988-PAFAEA**



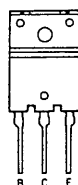
**2SA1221-K**  
**2SC2958**



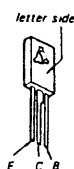
**KSA708**  
**2SD2012**



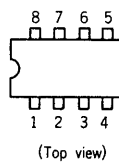
2SB1587-OPY  
2SD2438-OPY



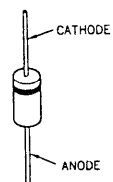
**2SD809-K**

**2SK246-GR3**

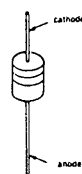
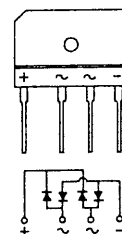
**uPC4558C**



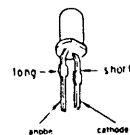
**HZS4ALL**  
**UZ-12BSB**  
**UZ-13BSB**  
**UZL-24L**  
**UZ-6.2BSC**  
**1N4148M**  
**1S1585**



**HZS6C3L**  
**UZ-4.3BSB**  
**11ES2**

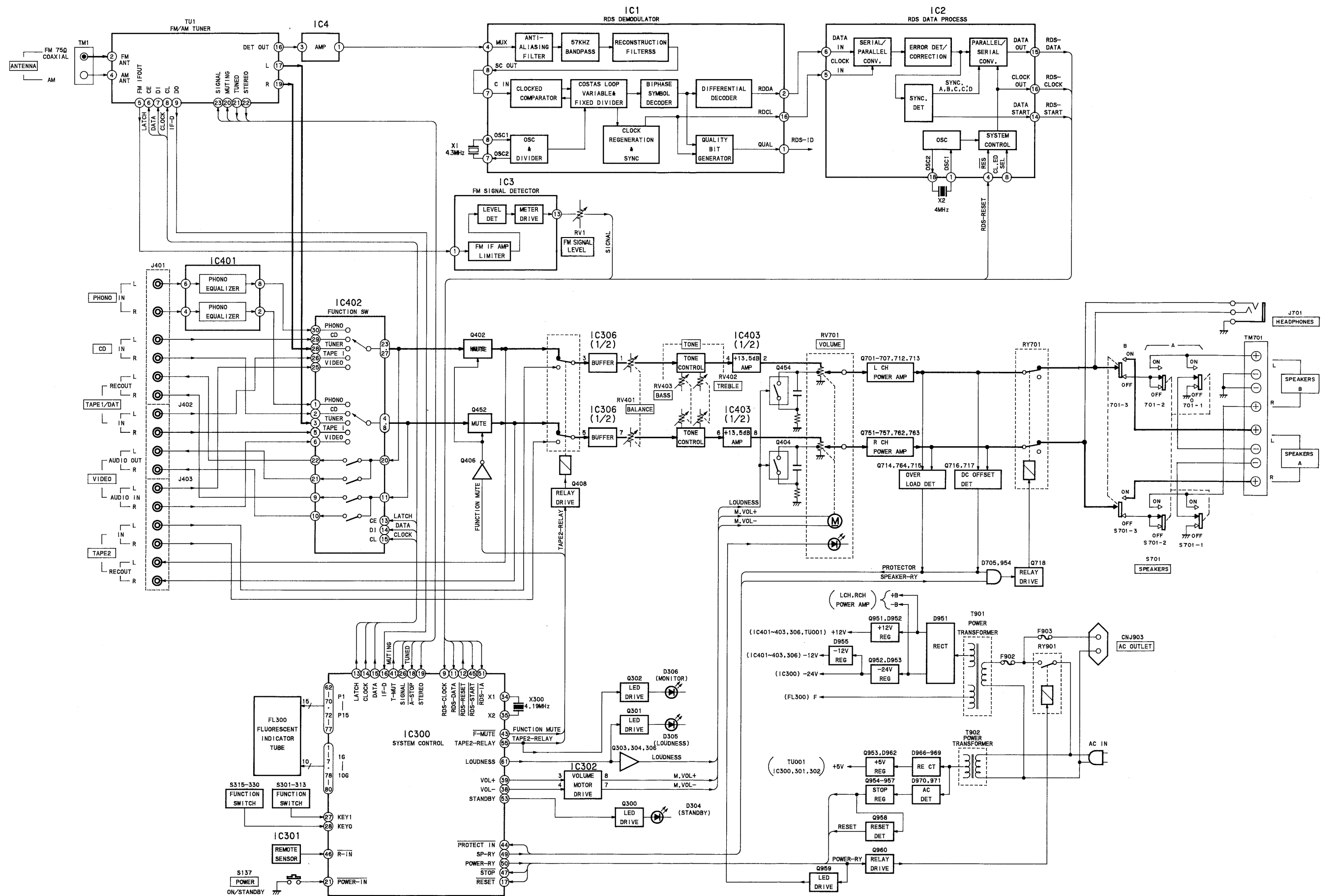
**RBV-402**

**SEL3210S-CD**  
**SEL3810A-CD**





## 4-3. BLOCK DIAGRAM

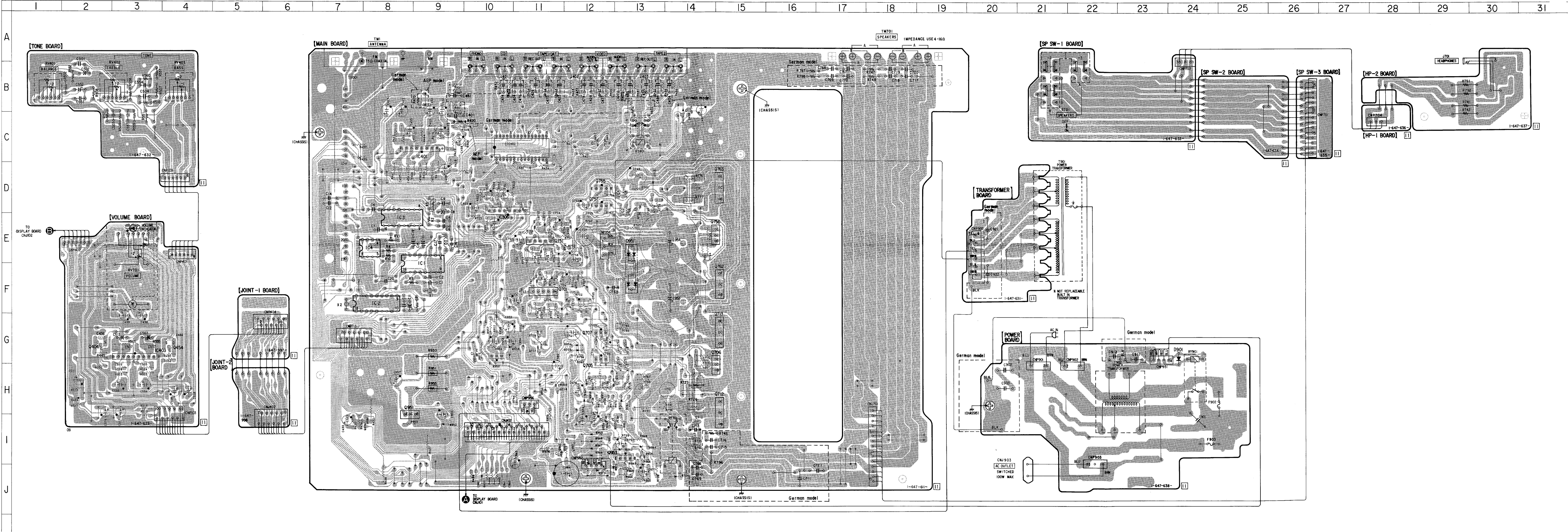


4-4. PRINTED WIRING BOARD — MAIN SECTION —  
• See page 7 for Circuit Boards Location and see page 8 for Semiconductor Lead Layouts.

• Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D401	J-10	Q713	G-15
D403	C-14	Q714	H-13
D404	H-2	Q715	H-12
D701	F-11	Q716	G-11
D702	G-11	Q717	G-11
D703	H-13	Q718	H-11
D704	J-14	Q751	E-11
D705	G-12	Q752	C-12
D751	E-11	Q753	E-12
D752	E-11	Q754	E-11
D753	D-13	Q755	D-12
D901	G-24	Q756	E-14
D951	E-13	Q757	D-12
D952	I-9	Q762	F-15
D953	G-10	Q763	D-15
D954	G-12	Q764	E-13
D955	G-10	Q951	H-8
D956	H-11	Q952	H-10
D962	I-13	Q953	I-12
D963	J-13	Q954	I-13
D964	I-13	Q955	I-12
D965	H-12	Q956	I-12
D966	I-12	Q957	H-12
D967	I-12	Q958	H-12
D968	I-12	Q959	G-10
D969	I-12	Q960	I-11
D970	J-12		
D971	J-12		
IC1	F-8		
IC2	F-8		
IC3	E-8		
IC4	E-7		
IC306	E-10		
IC401	C-9		
IC402	C-10		
IC403	G-3		
Q402	C-12		
Q404	G-2		
Q406	I-8		
Q408	C-14		
Q452	C-12		
Q454	G-4		
Q701	F-11		
Q702	F-11		
Q703	F-12		
Q704	F-11		
Q705	H-12		
Q706	G-14		
Q707	G-12		
Q712	H-15		

Note:  
• : parts extracted from the components side.  
• : parts extracted from the components side.  
• : Pattern from the side which enable seen.



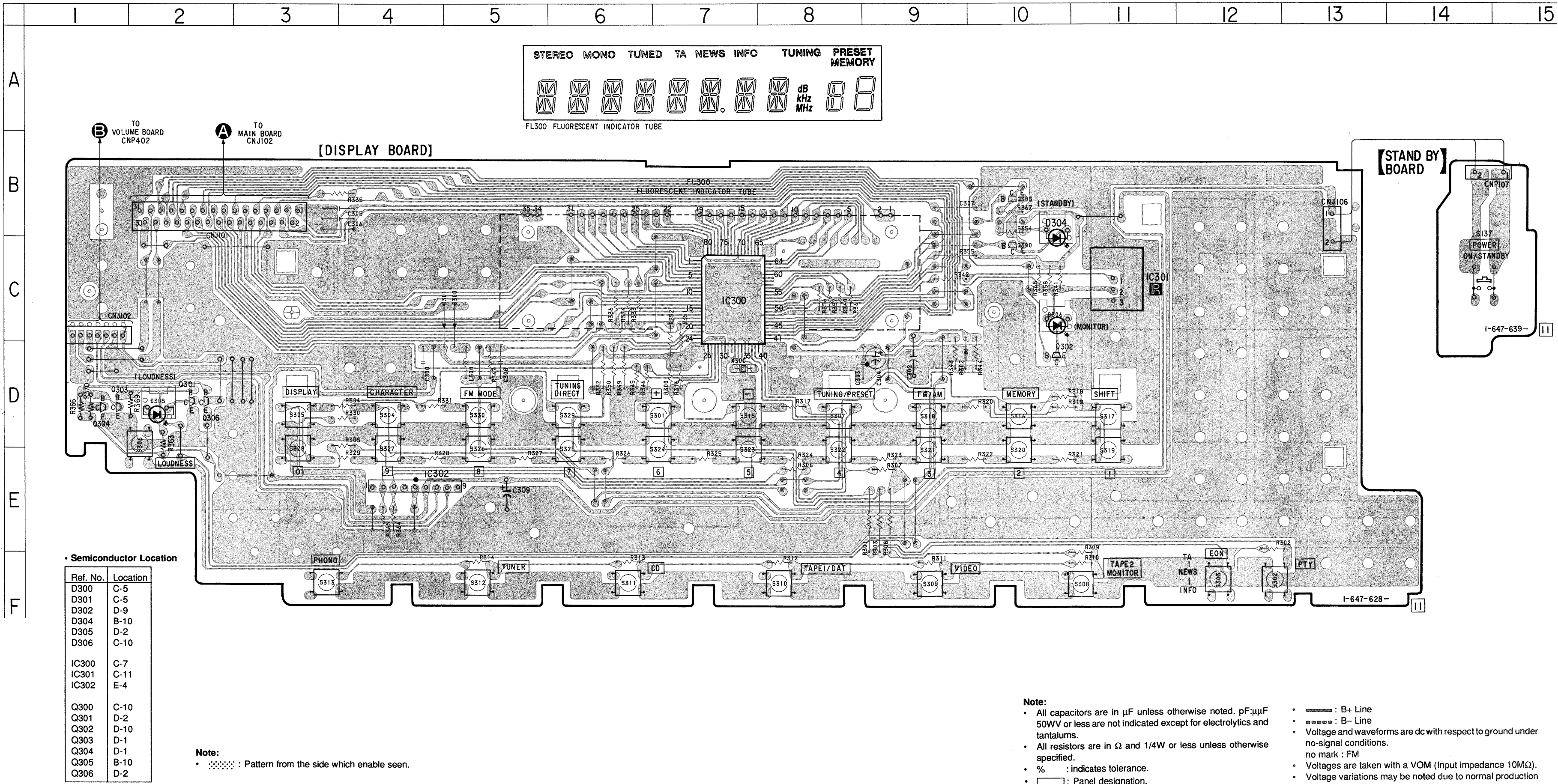


- ===== : B+ Line
- ===== : B- Line
- Voltage and waveforms are dc with respect to ground under no-signal conditions.
- no mark : FM  
( ) : AM
- Voltages are taken with a VOM (Input impedance 10M $\Omega$ ).
- Voltage variations may be noted due to normal production tolerances.
- Signal path.  
□ : FM

[illegible]

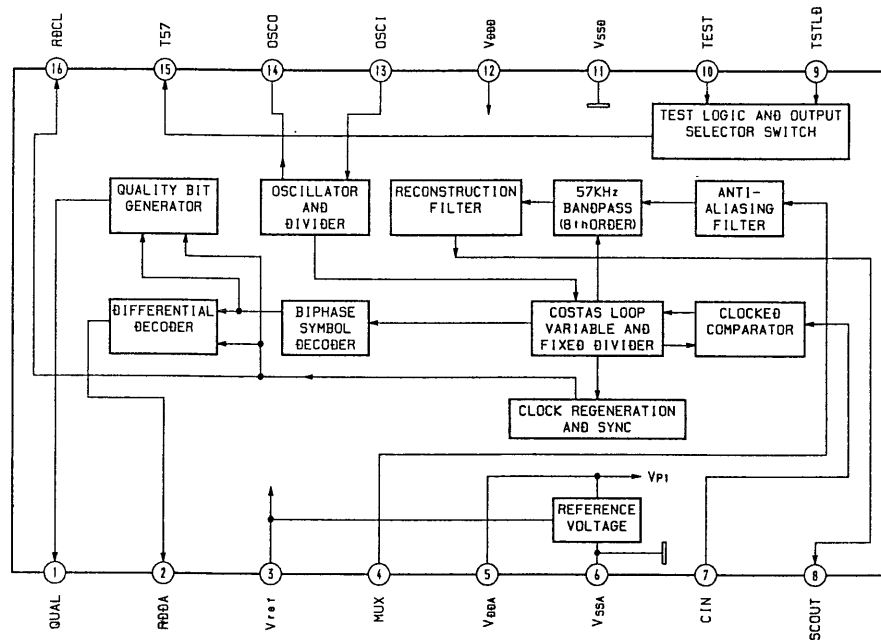


4-6. PRINTED WIRING BOARD — DISPLAY SECTION —  
• See page 7 for Circuit Boards Location and see page 8 for Semiconductor Lead Layouts.

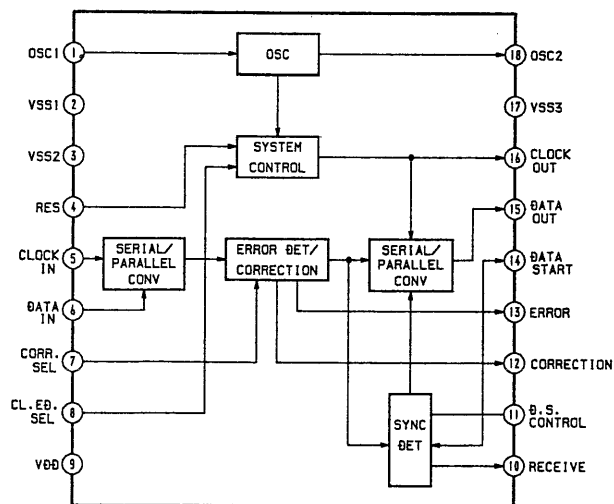


## 4-8. IC BLOCK DIAGRAMS

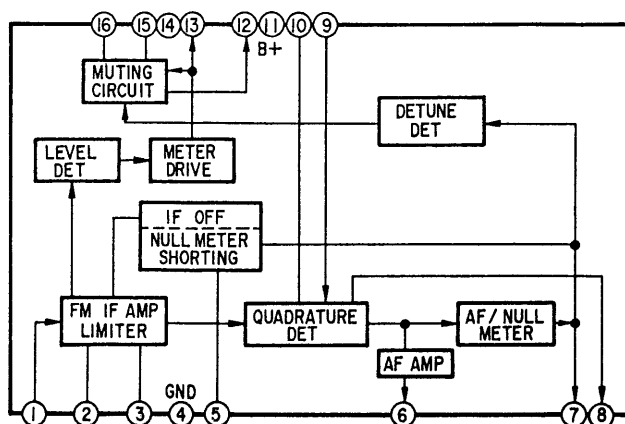
### IC001 SAA6579



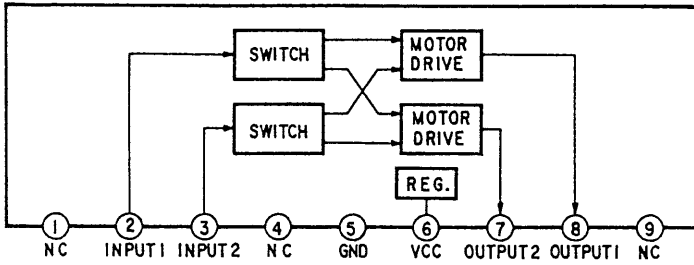
### IC002 LC7073



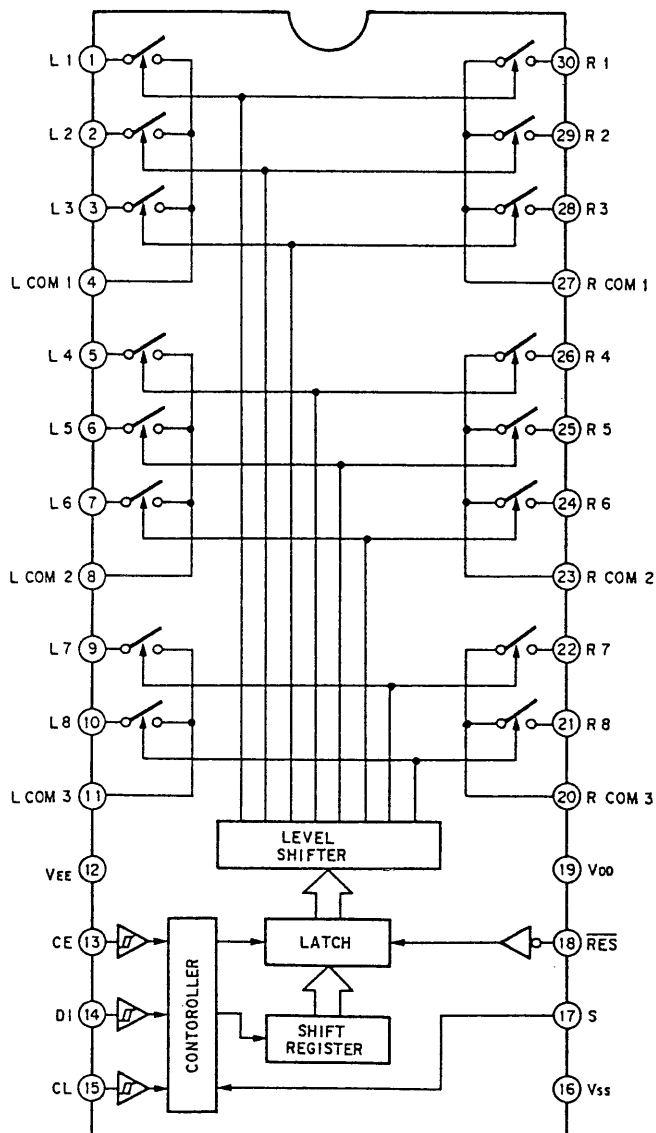
### IC003 LA1235



## IC302 BA6208



## IC402 LC7822



## SECTION 5 EXPLODED VIEWS

### NOTE:

- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Items marked " \* " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list is given in the last of this parts list.
- G : German model.

The components identified by mark or dotted line with mark are critical for safety. Replace only with part number specified.

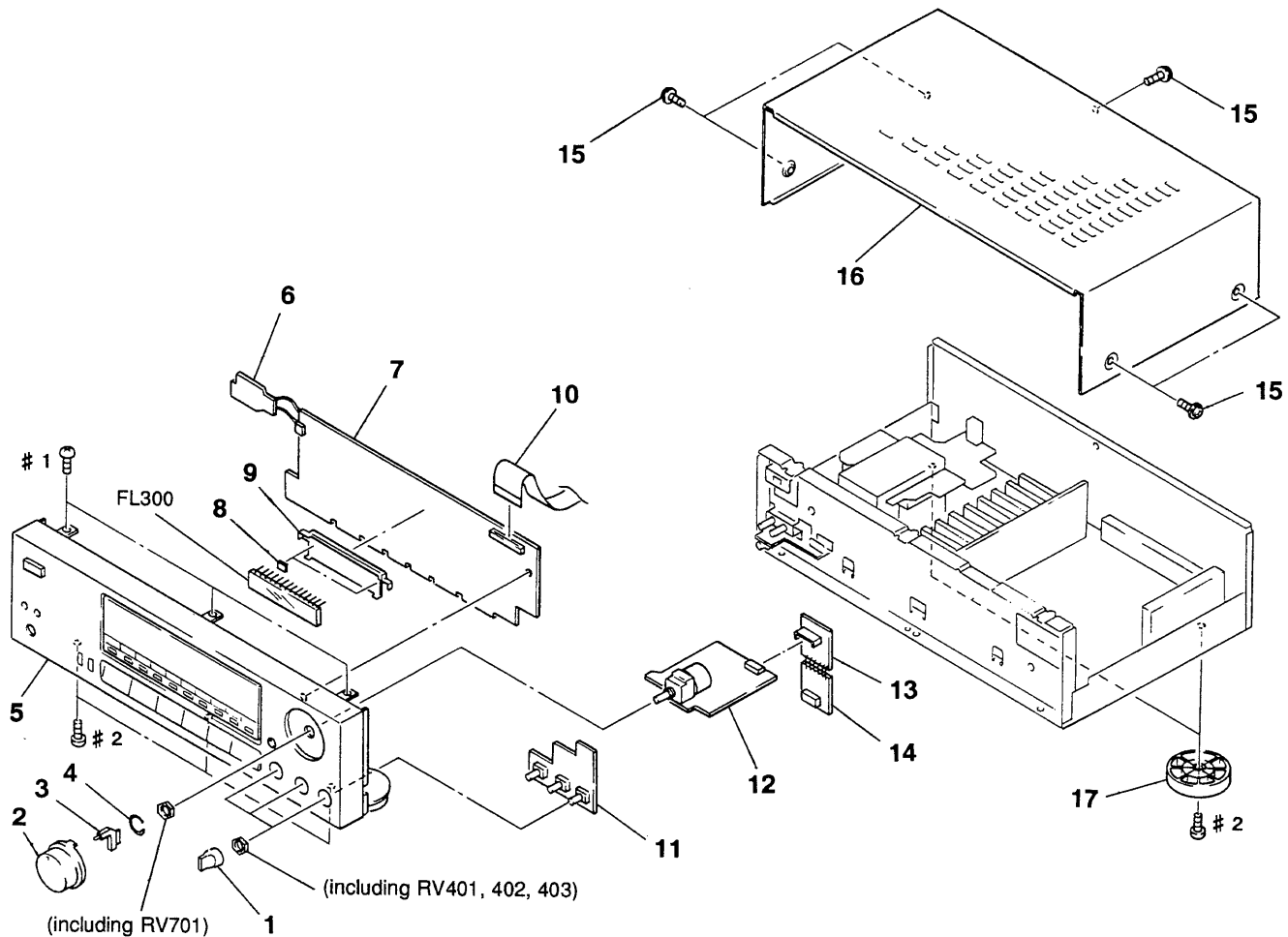
### Note:

There are two type of AEP models which are depend on countries.

AE2 (AEP2) model: Model for Scandinavian countries.  
Switzerland, Spain and Portugal

AE1 (AEP1) model: Model for other European countries

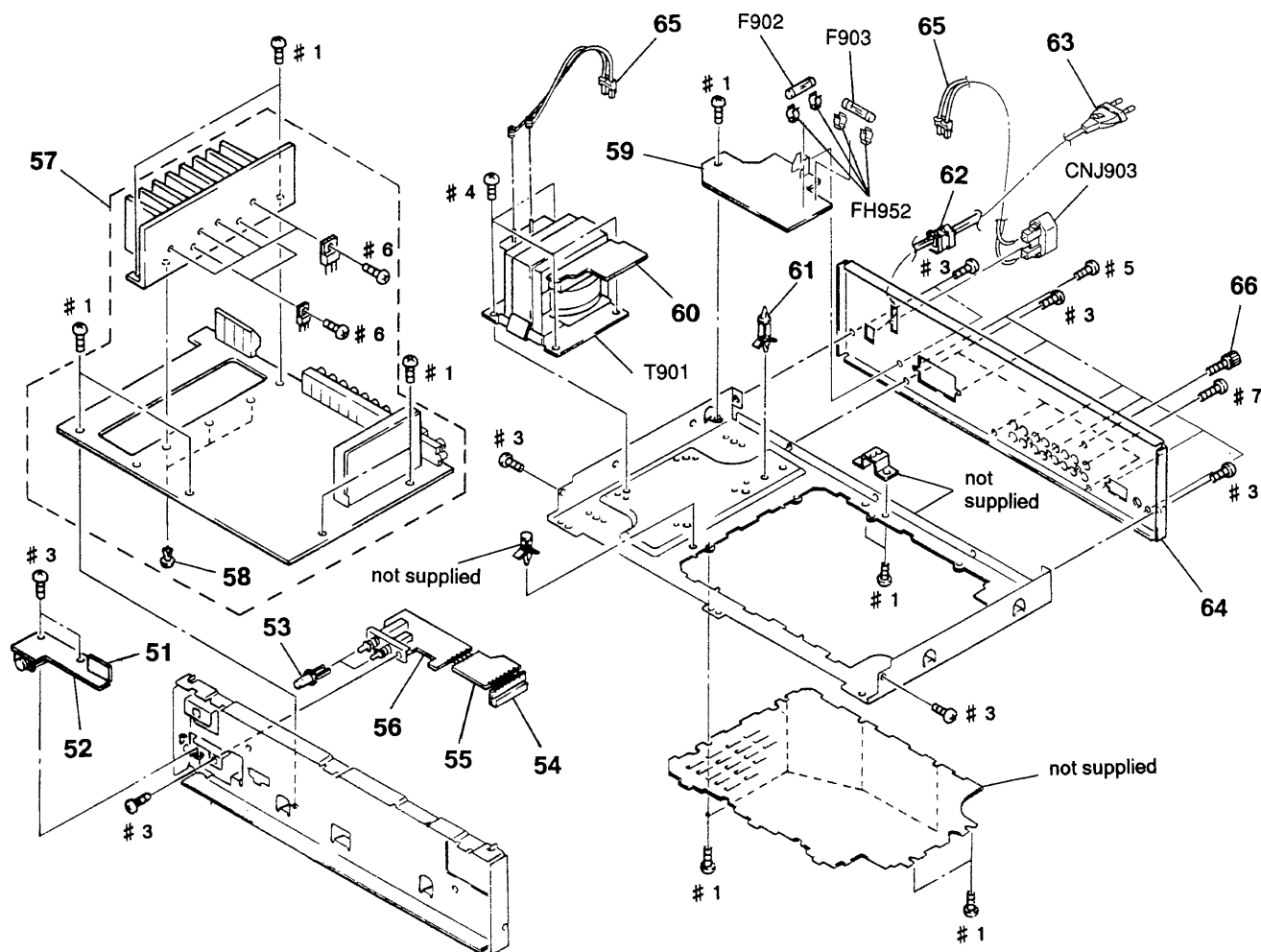
### 5-1. FRONT PANEL SECTION



Ref. No.	Part No.	Description
1	4-957-383-01	KNOB (F14)
2	4-949-659-01	KNOB (VOL-NEW)
3	4-958-991-01	PLATE (VOL), LIGHT GUIDE
4	3-350-426-01	SPRING, RING
5	X-4943-601-1	PANEL ASSY, FRONT
* 6	1-647-632-11	STAND BY BOARD
* 7	A-4360-427-A	DISPLAY BOARD, COMPLETE
* 8	4-921-941-01	CUSHION (FL)
* 9	4-943-107-11	HOLDER (FL TUBE)
10	1-696-456-11	WIRE (FLAT TYPE) (31 CORE)

Remark	Ref. No.	Part No.	Description	Remark
	* 11	1-647-632-11	TONE BOARD	
	* 12	A-4360-428-A	VOLUME BOARD, COMPLETE	
	* 13	1-648-997-11	JOINT-1 BOARD	
	* 14	1-648-998-11	JOINT-2 BOARD	
	15	3-704-366-01	SCREW (CASE) (M3X8)	
	* 16	4-951-795-01	CASE	
	17	X-4941-292-1	FOOT ASSY (F58175S)	
	FL300	1-517-141-11	INDICATOR TUBE, FLUORESCENT	

## 5-2. CHASSIS SECTION



The components identified by mark  $\triangle$  or dotted line with mark  $\triangle$  are critical for safety. Replace only with part number specified.

Ref. No.	Part No.	Description
* 51	1-647-636-11	HP-1 BOARD
* 52	1-647-637-11	HP-2 BOARD
53	4-951-801-02	BUTTON (S)
* 54	1-647-633-11	SP SW-1 BOARD
* 55	1-647-634-11	SP SW-2 BOARD
* 56	1-647-635-11	SP SW-3 BOARD
* 57	A-4360-426-A	MAIN BOARD, COMPLETE (AEP)
* 57	A-4360-437-A	MAIN BOARD, COMPLETE (G)
58	4-812-134-00	RIVET NYLON, 3.5
* 59	1-647-638-11	POWER BOARD
* 60	1-647-627-11	TRANSFORMER BOARD
* 61	4-924-098-31	HOLDER, PC BOARD

Remark	Ref. No.	Part No.	Description	Remark
	* 62	3-703-244-00	BUSHING (2104), CORD	
	$\triangle$ 63	1-575-651-11	CORD, POWER	
	* 64	4-957-709-01	PANEL, BACK (AEP1)	
	* 64	4-957-709-11	PANEL, BACK (AEP2)	
	* 64	4-957-709-21	PANEL, BACK (G)	
	65	1-750-854-11	CORD (WITH CONNECTOR)	
	66	4-947-010-01	SCREW, FEEDER FIXED	
	$\triangle$ CNJ903	1-526-794-11	OUTLET, AC (AC OUTLET)	
	$\triangle$ F902	1-532-259-00	FUSE (T1.6A 250V)	
	$\triangle$ F903	1-532-259-00	FUSE (T1.6A 250V)	
	* FH952	1-533-293-11	HOLDER, FUSE	
	$\triangle$ T901	1-450-363-11	TRANSFORMER, POWER	



## SECTION 6

### ELECTRICAL PARTS LIST

### DISPLAY

#### NOTE:

The components identified by mark  $\Delta$  or dotted line with mark  $\Delta$  are critical for safety.  
Replace only with part number specified.

When indicating parts by reference number, please include the board name.

#### Note:

There are two type of AEP models which are depend on countries.

AE2 (AEP2) model: Model for Scandinavian countries.  
Switzerland, Spain and Portugal

AE1 (AEP1) model: Model for other European countries

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Items marked "\*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

#### • RESISTORS

All resistors are in ohms

METAL: Metal-film resistor

METAL OXIDE: Metal Oxide-film resistor

F : nonflammable

#### • SEMICONDUCTORS

In each case, u:  $\mu$ , for example:

uA...:  $\mu$  A..., uPA...:  $\mu$  PA..., uPB...:  $\mu$  PB...,

uPC...:  $\mu$  PC..., uPD...:  $\mu$  PD...

#### • CAPACITORS

uF :  $\mu$  F

#### • COILS

uH :  $\mu$  H

- Hardware (# mark) list is given in the last of this parts list.

- G : German model.

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
*	A-4360-427-A	DISPLAY BOARD, COMPLETE *****		< TRANSISTOR >			
*	4-921-941-01	CUSHION (FL)		Q300	8-729-119-78	TRANSISTOR 2SC2785-HFE	
*	4-943-107-11	HOLDER (FL TUBE)		Q301	8-729-900-36	TRANSISTOR DTC124ES	
< CAPACITOR >				Q302	8-729-119-78	TRANSISTOR 2SC2785-HFE	
C300	1-161-379-00	CERAMIC 0.01uF 20% 25V		Q303	8-729-900-36	TRANSISTOR DTC124ES	
C302	1-125-486-11	DOUBLE LAYERS 0.22F 5.5V		Q304	8-729-900-36	TRANSISTOR DTC124ES	
C303	1-161-379-00	CERAMIC 0.01uF 20% 25V		Q305	8-729-900-63	TRANSISTOR DTA124ES	
C304	1-124-903-11	ELECT 1uF 20% 50V		Q306	8-729-900-63	TRANSISTOR DTA124ES	
C305	1-164-159-11	CERAMIC 0.1uF 50V		< RESISTOR >			
C306	1-164-159-11	CERAMIC 0.1uF 50V		R300	1-249-419-11	CARBON 1.5K 5% 1/4W F	
C307	1-161-379-00	CERAMIC 0.01uF 20% 25V		R301	1-249-405-11	CARBON 100 5% 1/4W F	
C308	1-161-379-00	CERAMIC 0.01uF 20% 25V		R302	1-249-406-11	CARBON 120 5% 1/4W F	
C309	1-124-907-11	ELECT 10uF 20% 50V		R303	1-249-406-11	CARBON 120 5% 1/4W F	
< CONNECTOR >				R304	1-249-407-11	CARBON 150 5% 1/4W F	
* CNJ101	1-568-873-11	SOCKET, CONNECTOR 31P		R305	1-249-408-11	CARBON 180 5% 1/4W F	
* CNJ102	1-566-969-11	HOUSING, CONNECTOR(PC BOARD)7P		R306	1-249-409-11	CARBON 220 5% 1/4W F	
* CNJ106	1-565-480-11	CONNECTOR, BOARD TO BOARD 4P		R307	1-249-410-11	CARBON 270 5% 1/4W F	
< DIODE >				R308	1-249-411-11	CARBON 330 5% 1/4W F	
D300	8-719-200-82	DIODE 11ES2		R309	1-249-413-11	CARBON 470 5% 1/4W F	
D301	8-719-987-63	DIODE 1N4148M		R310	1-249-414-11	CARBON 560 5% 1/4W F	
D302	8-719-987-63	DIODE 1N4148M		R311	1-249-416-11	CARBON 820 5% 1/4W F	
D304	8-719-313-69	DIODE SEL3210S-CD		R312	1-249-418-11	CARBON 1.2K 5% 1/4W F	
D305	8-719-313-72	LED SEL3810A-CD		R313	1-249-421-11	CARBON 2.2K 5% 1/4W F	
D306	8-719-313-72	LED SEL3810A-CD		R314	1-249-424-11	CARBON 3.9K 5% 1/4W F	
< FLUORESCENT INDICATOR >				R316	1-249-419-11	CARBON 1.5K 5% 1/4W F	
FL300	1-517-141-11	INDICATOR TUBE, FLUORESCENT		R317	1-249-405-11	CARBON 100 5% 1/4W F	
< IC >				R318	1-249-406-11	CARBON 120 5% 1/4W F	
IC300	8-759-189-68	IC uPD78043GF-044-3B9		R319	1-249-406-11	CARBON 120 5% 1/4W F	
IC301	8-749-923-11	IC GP1U58XB		R320	1-249-407-11	CARBON 150 5% 1/4W F	
IC302	8-759-962-08	IC BA6208		R321	1-249-408-11	CARBON 180 5% 1/4W F	
< COIL >				R322	1-249-409-11	CARBON 220 5% 1/4W F	
L300	1-410-509-11	INDUCTOR 10uH		R323	1-249-410-11	CARBON 270 5% 1/4W F	
				R324	1-249-411-11	CARBON 330 5% 1/4W F	
				R325	1-249-413-11	CARBON 470 5% 1/4W F	
				R326	1-249-414-11	CARBON 560 5% 1/4W F	
				R327	1-249-416-11	CARBON 820 5% 1/4W F	
				R328	1-249-418-11	CARBON 1.2K 5% 1/4W F	
				R329	1-249-421-11	CARBON 2.2K 5% 1/4W F	
				R330	1-249-424-11	CARBON 3.9K 5% 1/4W F	

DISPLAY	HP-1	HP-2	JOINT-1
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Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
R331	1-249-430-11	CARBON	12K 5% 1/4W	S318	1-554-303-21	SWITCH, TACTILE (FM/AM)	
R332	1-249-437-11	CARBON	47K 5% 1/4W	S319	1-554-303-21	SWITCH, TACTILE (1)	
R333	1-249-405-11	CARBON	100 5% 1/4W F	S320	1-554-303-21	SWITCH, TACTILE (2)	
R334	1-249-405-11	CARBON	100 5% 1/4W F	S321	1-554-303-21	SWITCH, TACTILE (3)	
R335	1-249-405-11	CARBON	100 5% 1/4W F				
R336	1-249-405-11	CARBON	100 5% 1/4W F	S322	1-554-303-21	SWITCH, TACTILE (4)	
R341	1-249-405-11	CARBON	100 5% 1/4W F	S323	1-554-303-21	SWITCH, TACTILE (5)	
R342	1-249-405-11	CARBON	100 5% 1/4W F	S324	1-554-303-21	SWITCH, TACTILE (6)	
R343	1-249-401-11	CARBON	47 5% 1/4W F	S325	1-554-303-21	SWITCH, TACTILE (7)	
R344	1-249-417-11	CARBON	1K 5% 1/4W F	S326	1-554-303-21	SWITCH, TACTILE (8)	
R345	1-247-895-00	CARBON	470K 5% 1/4W	S327	1-554-303-21	SWITCH, TACTILE (9)	
R346	1-249-437-11	CARBON	47K 5% 1/4W	S328	1-554-303-21	SWITCH, TACTILE (0)	
R347	1-249-429-11	CARBON	10K 5% 1/4W	S329	1-554-303-21	SWITCH, TACTILE (TUNING DIRECT)	
R349	1-249-437-11	CARBON	47K 5% 1/4W	S330	1-554-303-21	SWITCH, TACTILE (FM MODE)	
R350	1-249-437-11	CARBON	47K 5% 1/4W				
						< VIBRATOR >	
R351	1-249-437-11	CARBON	47K 5% 1/4W	X300	1-577-101-11	VIBRATOR, CERAMIC (4.19MHz)	
R352	1-249-437-11	CARBON	47K 5% 1/4W				
R354	1-249-411-11	CARBON	330 5% 1/4W	*****			
R355	1-249-429-11	CARBON	10K 5% 1/4W				
R356	1-249-437-11	CARBON	47K 5% 1/4W	*	1-647-636-11	HP-1 BOARD	
						*****	
R357	1-249-437-11	CARBON	47K 5% 1/4W				
R358	1-249-411-11	CARBON	330 5% 1/4W			< CONNECTOR >	
R360	1-249-437-11	CARBON	47K 5% 1/4W				
R361	1-249-429-11	CARBON	10K 5% 1/4W	CNP704	1-691-160-11	PIN, CONNECTOR 3P	
R363	1-249-411-11	CARBON	330 5% 1/4W	*****			
R364	1-249-437-11	CARBON	47K 5% 1/4W				
R365	1-249-437-11	CARBON	47K 5% 1/4W	*	1-647-637-11	HP-2 BOARD	
R366	1-249-417-11	CARBON	1K 5% 1/4W F			*****	
R367	1-249-429-11	CARBON	10K 5% 1/4W				
R368	1-249-429-11	CARBON	10K 5% 1/4W			< JACK >	
R369	1-249-429-11	CARBON	10K 5% 1/4W	J701	1-568-151-11	JACK (LARGE TYPE) (HEADPHONE)	
R370	1-249-429-11	CARBON	10K 5% 1/4W				
						< RESISTOR >	
		< SWITCH >					
S301	1-554-303-21	SWITCH, TACTILE (+)		R741	1-247-753-11	CARBON	1.2K 5% 1/2W
S302	1-554-303-21	SWITCH, TACTILE (PTY)		R742	1-247-753-11	CARBON	1.2K 5% 1/2W
S303	1-554-303-21	SWITCH, TACTILE (EON)		R791	1-247-753-11	CARBON	1.2K 5% 1/2W
S304	1-554-303-21	SWITCH, TACTILE (CHARACTER)		R792	1-247-753-11	CARBON	1.2K 5% 1/2W
S305	1-554-303-21	SWITCH, TACTILE (DISPLAY)		*****			
S306	1-554-303-21	SWITCH, TACTILE (LOUDNESS)		*	1-648-997-11	JOINT-1 BOARD	
S307	1-554-303-21	SWITCH, TACTILE (TUNING/PRESET)				*****	
S308	1-554-303-21	SWITCH, TACTILE (TAPE2/MONITOR)					
S309	1-554-303-21	SWITCH, TACTILE (VIDEO)				< CONNECTOR >	
S310	1-554-303-21	SWITCH, TACTILE (TAPE1/DAT)					
S311	1-554-303-21	SWITCH, TACTILE (CD)		* CNP404	1-750-384-11	CONNECTOR, BOARD TO BOARD 11P	
S312	1-554-303-21	SWITCH, TACTILE (TUNER)		*****			
S313	1-554-303-21	SWITCH, TACTILE (PHONE)					
S315	1-554-303-21	SWITCH, TACTILE (-)					
S316	1-554-303-21	SWITCH, TACTILE (MEMORY)					
S317	1-554-303-21	SWITCH, TACTILE (SHIFT)					

Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
*	1-648-998-11	JOINT-2 BOARD ***** < CONNECTOR >		C406	1-137-437-11	FILM 0.0056uF 5%	50V
				C407	1-137-365-11	FILM 0.0015uF 5%	50V
				C408	1-123-382-00	ELECT 3.3uF 20%	100V
				C420	1-164-159-11	CERAMIC 0.1uF	50V
* CNJ402	1-750-383-11	CONNECTOR, BOARD TO BOARD 11P		C422	1-124-477-11	ELECT 47uF 20%	25V
*****				C423	1-124-477-11	ELECT 47uF 20%	25V
				C424	1-162-282-31	CERAMIC 100PF 10%	50V (G)
				C425	1-162-282-31	CERAMIC 100PF 10%	50V (G)
				C426	1-162-282-31	CERAMIC 100PF 10%	50V (G)
*	A-4360-426-A	MAIN BOARD, COMPLETE (AEP) *****		C427	1-162-282-31	CERAMIC 100PF 10%	50V (G)
				C429	1-162-282-31	CERAMIC 100PF 10%	50V (G)
*	A-4360-437-A	MAIN BOARD, COMPLETE (G) *****		C430	1-162-294-31	CERAMIC 0.001uF 10%	50V
				C431	1-137-364-91	FILM 0.001uF 5%	50V
				C433	1-124-925-11	ELECT 2.2uF 20%	100V
	4-812-134-00	RIVET NYLON, 3.5					
*	4-942-204-01	PLATE, GROUND		C434	1-162-286-31	CERAMIC 220PF 10%	50V (G)
*	4-953-350-01	PLATE, GROUND		C435	1-162-282-31	CERAMIC 100PF 10%	50V (G)
	7-685-647-79	SCREW +BVTP 3X10 TYPE2 IT-3		C437	1-124-907-11	ELECT 10uF 20%	50V
	7-682-548-04	SCREW +BVTT 3X8 (S)		C451	1-162-282-31	CERAMIC 100PF 10%	50V (G)
		< CAPACITOR >		C452	1-123-382-00	ELECT 3.3uF 20%	100V
C1	1-162-280-31	CERAMIC 82PF 10%	50V	C453	1-162-282-31	CERAMIC 100PF 10%	50V (AEP)
C2	1-162-215-31	CERAMIC 47PF 5%	50V	C453	1-162-286-31	CERAMIC 220PF 10%	50V (G)
C4	1-162-282-31	CERAMIC 100PF 10%	50V	C454	1-162-282-31	CERAMIC 100PF 10%	50V
C5	1-161-379-00	CERAMIC 0.01uF 20%	25V	C455	1-124-034-51	ELECT 33uF 20%	16V
C6	1-161-379-00	CERAMIC 0.01uF 20%	25V	C456	1-137-437-11	FILM 0.0056uF 5%	50V
C7	1-161-379-00	CERAMIC 0.01uF 20%	25V	C457	1-137-365-11	FILM 0.0015uF 5%	50V
C8	1-124-910-11	ELECT 47uF 20%	50V	C458	1-123-382-00	ELECT 3.3uF 20%	100V
C9	1-161-379-00	CERAMIC 0.01uF 20%	25V	C474	1-162-282-31	CERAMIC 100PF 10%	50V (G)
C10	1-161-379-00	CERAMIC 0.01uF 20%	25V	C475	1-162-282-31	CERAMIC 100PF 10%	50V (G)
C11	1-124-907-11	ELECT 10uF 20%	50V	C476	1-162-282-31	CERAMIC 100PF 10%	50V (G)
C12	1-161-379-00	CERAMIC 0.01uF 20%	25V	C477	1-162-282-31	CERAMIC 100PF 10%	50V (G)
C14	1-161-379-00	CERAMIC 0.01uF 20%	25V	C479	1-162-282-31	CERAMIC 100PF 10%	50V (G)
C15	1-124-925-11	ELECT 2.2uF 20%	100V	C484	1-162-286-31	CERAMIC 220PF 10%	50V (G)
C16	1-161-379-00	CERAMIC 0.01uF 20%	25V	C485	1-162-282-31	CERAMIC 100PF 10%	50V (G)
C17	1-162-291-31	CERAMIC 560PF 10%	50V	C701	1-124-927-11	ELECT 4.7uF 20%	100V
C19	1-124-907-11	ELECT 10uF 20%	50V	C702	1-162-286-31	CERAMIC 220PF 10%	50V
C20	1-162-288-31	CERAMIC 330PF 10%	50V	C703	1-102-116-00	CERAMIC 680PF 10%	50V
C301	1-124-907-11	ELECT 10uF 20%	50V	C704	1-124-477-11	ELECT 47uF 20%	25V
C302	1-162-215-31	CERAMIC 47PF 5%	50V (AEP)	C705	1-164-039-11	CERAMIC 3PF 0.25PF	50V
C302	1-162-283-31	CERAMIC 120PF 10%	50V (G)	C706	1-102-989-00	CERAMIC 68PF 5%	500V
C303	1-124-907-11	ELECT 10uF 20%	50V	C707	1-102-989-00	CERAMIC 68PF 5%	500V
C351	1-124-907-11	ELECT 10uF 20%	50V	C708	1-124-120-11	ELECT 220uF 20%	25V
C352	1-162-215-31	CERAMIC 47PF 5%	50V (AEP)	C709	1-124-477-11	ELECT 47uF 20%	25V
C352	1-162-283-31	CERAMIC 120PF 10%	50V (G)	C710	1-164-159-11	CERAMIC 0.1uF	50V
C353	1-124-907-11	ELECT 10uF 20%	50V	C711	1-164-159-11	CERAMIC 0.1uF	50V
C401	1-162-282-31	CERAMIC 100PF 10%	50V (G)	C712	1-136-161-00	FILM 0.047uF 5%	50V
C402	1-123-382-00	ELECT 3.3uF 20%	100V	C713	1-136-161-00	FILM 0.047uF 5%	50V
C403	1-162-282-31	CERAMIC 100PF 10%	50V (AEP)	C715	1-164-096-11	CERAMIC 0.01uF	50V (G)
C403	1-162-286-31	CERAMIC 220PF 10%	50V (G)	C716	1-164-096-11	CERAMIC 0.01uF	50V (G)
C404	1-162-282-31	CERAMIC 100PF 10%	50V	C717	1-164-096-11	CERAMIC 0.01uF	50V (G)
C405	1-124-034-51	ELECT 33uF 20%	16V	C718	1-164-096-11	CERAMIC 0.01uF	50V (G)

# MAIN

Ref.No.	Part No.	Description				Remark	Ref.No.	Part No.	Description				Remark	
C719	1-164-096-11	CERAMIC	0.01uF		50V (G)		C982	1-161-494-00	CERAMIC	0.022uF		25V		
C720	1-164-096-11	CERAMIC	0.01uF		50V (G)		C983	1-161-494-00	CERAMIC	0.022uF		25V		
C721	1-161-494-00	CERAMIC	0.022uF		25V (G)		C984	1-124-557-11	ELECT	1000uF	20%	25V		
C726	1-162-215-31	CERAMIC	47PF	5%	50V (AEP)		< CONNECTOR >							
C726	1-162-219-31	CERAMIC	68PF	5%	50V (G)		* CNJ102	1-568-845-11	SOCKET, CONNECTOR	31P				
C727	1-124-911-11	ELECT	220uF	20%	50V		CNJ701	1-573-095-11	SOCKET, CONNECTOR	15P				
C749	1-124-911-11	ELECT	220uF	20%	50V		* CNP113	1-750-384-11	CONNECTOR, BOARD TO BOARD	11P				
C751	1-124-927-11	ELECT	4.7uF	20%	100V		* CNP952	1-564-507-11	PLUG, CONNECTOR	4P				
C752	1-162-286-31	CERAMIC	220PF	10%	50V		* CNP954	1-564-104-00	PIN, CONNECTOR (B3P-VH)	3P				
C753	1-102-116-00	CERAMIC	680PF	10%	50V		* CNP956	1-564-506-11	PLUG, CONNECTOR	3P				
C754	1-124-477-11	ELECT	47uF	20%	25V		< DIODE >							
C755	1-164-039-11	CERAMIC	3PF	0.25PF	50V		D401	8-719-987-63	DIODE	1N4148M				
C756	1-102-989-00	CERAMIC	68PF	5%	500V		D403	8-719-987-63	DIODE	1N4148M				
C757	1-102-989-00	CERAMIC	68PF	5%	500V		D701	8-719-933-41	DIODE	HZS6C3L				
C758	1-124-120-11	ELECT	220uF	20%	25V		D702	8-719-987-63	DIODE	1N4148M				
C759	1-124-477-11	ELECT	47uF	20%	25V		D703	8-719-815-85	DIODE	1S1585				
C760	1-164-159-11	CERAMIC	0.1uF		50V		D704	8-719-987-63	DIODE	1N4148M				
C761	1-124-472-11	ELECT	470uF	20%	10V		D705	8-719-987-63	DIODE	1N4148M				
C762	1-136-161-00	FILM	0.047uF	5%	50V		D751	8-719-933-41	DIODE	HZS6C3L				
C763	1-136-161-00	FILM	0.047uF	5%	50V		D752	8-719-987-63	DIODE	1N4148M				
C765	1-164-096-11	CERAMIC	0.01uF		50V (G)		D753	8-719-815-85	DIODE	1S1585				
C766	1-164-096-11	CERAMIC	0.01uF		50V (G)		D951	8-719-312-09	DIODE	RBA-402				
C767	1-164-096-11	CERAMIC	0.01uF		50V (G)		D952	8-719-010-78	DIODE	UZ-13BSB				
C768	1-164-096-11	CERAMIC	0.01uF		50V (G)		D953	8-719-002-33	DIODE	UZL-24L				
C769	1-164-096-11	CERAMIC	0.01uF		50V (G)		D954	8-719-987-63	DIODE	1N4148M				
C770	1-164-096-11	CERAMIC	0.01uF		50V (G)		D955	8-719-010-74	DIODE	UZ-12BSB				
C771	1-161-494-00	CERAMIC	0.022uF		25V (G)		D956	8-719-010-29	DIODE	UZ-4.3BSB				
C776	1-162-215-31	CERAMIC	47PF	5%	50V (AEP)		D962	8-719-010-47	DIODE	UZ-6.2BSC				
C776	1-162-219-31	CERAMIC	68PF	5%	50V (G)		D963	8-719-933-41	DIODE	HZS6C3L				
C951	1-108-702-11	MYLAR	0.068uF	10%	100V		D964	8-719-985-53	DIODE	HZS4ALL				
C952	1-108-702-11	MYLAR	0.068uF	10%	100V		D965	8-719-987-63	DIODE	1N4148M				
C953	1-125-614-11	ELECT	6800uF	20%	50V		D966	8-719-200-82	DIODE	11ES2				
C953	1-128-506-11	ELECT	6800uF	20%	50V		D967	8-719-200-82	DIODE	11ES2				
C954	1-125-614-11	ELECT	6800uF	20%	50V		D968	8-719-200-82	DIODE	11ES2				
C954	1-128-506-11	ELECT	6800uF	20%	50V		D969	8-719-200-82	DIODE	11ES2				
C955	1-124-478-11	ELECT	100uF	20%	25V		D970	8-719-987-63	DIODE	1N4148M				
C956	1-124-910-11	ELECT	47uF	20%	50V		D971	8-719-987-63	DIODE	1N4148M				
C957	1-124-477-11	ELECT	47uF	20%	25V		< IC >							
C958	1-124-910-11	ELECT	47uF	20%	50V		IC1	8-759-169-99	IC	SAA6579				
C959	1-124-907-11	ELECT	10uF	20%	50V		IC2	8-759-062-26	IC	LC7073				
C960	1-161-494-00	CERAMIC	0.022uF		25V		IC3	8-759-812-35	IC	LA1235				
C961	1-161-494-00	CERAMIC	0.022uF		25V		IC4	8-759-145-58	IC	uPC4558C				
C962	1-124-927-11	ELECT	4.7uF	20%	100V		IC306	8-759-634-50	IC	M5218AL				
C975	1-124-477-11	ELECT	47uF	20%	25V		IC401	8-759-112-93	IC	uPC4570HA-1				
C976	1-124-477-11	ELECT	47uF	20%	25V		IC402	8-759-805-14	IC	LC7822				
C977	1-124-903-11	ELECT	1uF	20%	50V									
C978	1-124-464-11	ELECT	0.22uF	20%	50V									
C979	1-124-902-00	ELECT	0.47uF	20%	50V									
C980	1-124-903-11	ELECT	1uF	20%	50V									
C981	1-161-494-00	CERAMIC	0.022uF		25V									

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
< JACK >				< RESISTOR >			
J401	1-580-825-11	JACK, PIN 6P (PHONO/CD/TAPE1/DAT)		R1	1-249-405-11	CARBON 100 5% 1/4W F	
J402	1-573-028-21	JACK, PIN 4P (VIDEO/TAPE1/DAT)		R2	1-249-411-11	CARBON 330 5% 1/4W	
J403	1-691-887-11	JACK, PIN 6P (VIDEO/TAPE2)		△R3	1-249-405-11	CARBON 100 5% 1/4W F	
< COIL >				R5	1-249-421-11	CARBON 2. 2K 5% 1/4W F	
L1	1-410-521-11	INDUCTOR 100uH		R8	1-249-426-11	CARBON 5. 6K 5% 1/4W	
L701	1-420-872-00	COIL, AIR CORE		R10	1-247-862-11	CARBON 20K 5% 1/4W	
L751	1-420-872-00	COIL, AIR CORE		R302	1-247-887-00	CARBON 220K 5% 1/4W	
< TRANSISTOR >				R303	1-247-887-00	CARBON 220K 5% 1/4W	
Q402	8-729-141-30	TRANSISTOR 2SC3623A-LK		R305	1-249-416-11	CARBON 820 5% 1/4W F	
Q406	8-729-900-63	TRANSISTOR DTA124ES		R352	1-247-887-00	CARBON 220K 5% 1/4W	
Q408	8-729-119-78	TRANSISTOR 2SC2785-HFE		R353	1-247-887-00	CARBON 220K 5% 1/4W	
Q452	8-729-141-30	TRANSISTOR 2SC3623A-LK		R355	1-249-416-11	CARBON 820 5% 1/4W F	
Q701	8-729-620-18	TRANSISTOR 2SA979-FG		R401	1-249-411-11	CARBON 330 5% 1/4W	
Q702	8-729-140-82	TRANSISTOR 2SA988-PAFAEA		R402	1-249-417-11	CARBON 1K 5% 1/4W F	
Q703	8-729-119-78	TRANSISTOR 2SC2785-HFE		R403	1-249-417-11	CARBON 1K 5% 1/4W F	
Q704	8-729-119-78	TRANSISTOR 2SC2785-HFE		R404	1-249-425-11	CARBON 4. 7K 5% 1/4W F	
Q705	8-729-122-13	TRANSISTOR 2SA1221-K		R405	1-249-417-11	CARBON 1K 5% 1/4W F	
Q706	8-729-209-15	TRANSISTOR 2SD2012		R407	1-249-425-11	CARBON 4. 7K 5% 1/4W F	
Q707	8-729-195-82	TRANSISTOR 2SC2958		R413	1-249-437-11	CARBON 47K 5% 1/4W	
Q712	8-729-020-72	TRANSISTOR 2SD2438-OPY		R414	1-247-897-11	CARBON 560K 5% 1/4W	
Q713	8-729-020-41	TRANSISTOR 2SB1587-OPY		R415	1-249-416-11	CARBON 820 5% 1/4W F	
Q714	8-729-140-82	TRANSISTOR 2SA988-PAFAEA		R416	1-247-897-11	CARBON 560K 5% 1/4W	
Q715	8-729-119-78	TRANSISTOR 2SC2785-HFE		R417	1-249-437-11	CARBON 47K 5% 1/4W	
Q716	8-729-119-78	TRANSISTOR 2SC2785-HFE		R418	1-249-417-11	CARBON 1K 5% 1/4W F	
Q717	8-729-119-78	TRANSISTOR 2SC2785-HFE		R419	1-247-897-11	CARBON 560K 5% 1/4W	
Q718	8-729-119-78	TRANSISTOR 2SC2785-HFE		R420	1-249-417-11	CARBON 1K 5% 1/4W F (G)	
Q751	8-729-620-18	TRANSISTOR 2SA979-FG		R421	1-249-408-11	CARBON 180 5% 1/4W F	
Q752	8-729-140-82	TRANSISTOR 2SA988-PAFAEA		R425	1-249-425-11	CARBON 4. 7K 5% 1/4W F	
Q753	8-729-119-78	TRANSISTOR 2SC2785-HFE		R426	1-249-437-11	CARBON 47K 5% 1/4W	
Q754	8-729-119-78	TRANSISTOR 2SC2785-HFE		R427	1-249-437-11	CARBON 47K 5% 1/4W	
Q755	8-729-122-13	TRANSISTOR 2SA1221-K		R430	1-249-437-11	CARBON 47K 5% 1/4W	
Q756	8-729-209-15	TRANSISTOR 2SD2012		R431	1-249-425-11	CARBON 4. 7K 5% 1/4W F	
Q757	8-729-195-82	TRANSISTOR 2SC2958		R432	1-247-883-00	CARBON 150K 5% 1/4W	
Q762	8-729-020-72	TRANSISTOR 2SD2438-OPY		R434	1-249-425-11	CARBON 4. 7K 5% 1/4W F	
Q763	8-729-020-41	TRANSISTOR 2SB1587-OPY		R436	1-249-417-11	CARBON 1K 5% 1/4W F	
Q764	8-729-140-82	TRANSISTOR 2SA988-PAFAEA		R437	1-249-437-11	CARBON 47K 5% 1/4W	
Q951	8-729-209-15	TRANSISTOR 2SD2012		R438	1-249-429-11	CARBON 10K 5% 1/4W	
Q952	8-729-140-97	TRANSISTOR KSA708		R439	1-249-437-11	CARBON 47K 5% 1/4W	
Q953	8-729-180-92	TRANSISTOR 2SD809-K		R440	1-249-437-11	CARBON 47K 5% 1/4W	
Q954	8-729-119-78	TRANSISTOR 2SC2785-HFE		R441	1-249-413-11	CARBON 470 5% 1/4W F	
Q955	8-729-119-76	TRANSISTOR 2SA1175-HFE		R444	1-249-437-11	CARBON 47K 5% 1/4W	
Q956	8-729-119-76	TRANSISTOR 2SA1175-HFE		R451	1-249-411-11	CARBON 330 5% 1/4W	
Q957	8-729-119-78	TRANSISTOR 2SC2785-HFE		R452	1-249-417-11	CARBON 1K 5% 1/4W F	
Q958	8-729-900-36	TRANSISTOR DTC124ES		R453	1-249-417-11	CARBON 1K 5% 1/4W F	
Q959	8-729-904-39	TRANSISTOR DTC114TS		R454	1-249-425-11	CARBON 4. 7K 5% 1/4W F	
Q960	8-729-119-78	TRANSISTOR 2SC2785-HFE		R455	1-249-417-11	CARBON 1K 5% 1/4W F	
				R457	1-249-425-11	CARBON 4. 7K 5% 1/4W F	
				R463	1-249-437-11	CARBON 47K 5% 1/4W	
				R464	1-247-897-11	CARBON 560K 5% 1/4W	

The components identified by mark △ or dotted line with mark △ are critical for safety.  
Replace only with part number specified.

# MAIN

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
R465	1-249-416-11	CARBON	820 5% 1/4W F	R754	1-249-421-11	CARBON	2. 2K 5% 1/4W F
R466	1-247-897-11	CARBON	560K 5% 1/4W	R755	1-249-426-11	CARBON	5. 6K 5% 1/4W
R467	1-249-437-11	CARBON	47K 5% 1/4W	R756	1-249-414-11	CARBON	560 5% 1/4W F
R468	1-249-417-11	CARBON	1K 5% 1/4W F	R757	1-249-423-11	CARBON	3. 3K 5% 1/4W F
R469	1-247-897-11	CARBON	560K 5% 1/4W	R758	1-249-411-11	CARBON	330 5% 1/4W
R470	1-249-417-11	CARBON	1K 5% 1/4W F (G)	△R759	1-249-409-11	CARBON	220 5% 1/4W F
R471	1-249-408-11	CARBON	180 5% 1/4W F	△R760	1-249-409-11	CARBON	220 5% 1/4W F
R481	1-249-425-11	CARBON	4. 7K 5% 1/4W F	R761	1-249-409-11	CARBON	220 5% 1/4W F
R486	1-249-417-11	CARBON	1K 5% 1/4W F	R762	1-249-435-11	CARBON	33K 5% 1/4W
R701	1-249-417-11	CARBON	1K 5% 1/4W F	△R763	1-249-397-11	CARBON	22 5% 1/4W F
R702	1-249-434-11	CARBON	27K 5% 1/4W	R764	1-249-428-11	CARBON	8. 2K 5% 1/4W F
R703	1-249-435-11	CARBON	33K 5% 1/4W	R765	1-249-409-11	CARBON	220 5% 1/4W F
R704	1-249-421-11	CARBON	2. 2K 5% 1/4W F	△R766	1-249-397-11	CARBON	22 5% 1/4W F
R705	1-249-426-11	CARBON	5. 6K 5% 1/4W	△R767	1-249-393-11	CARBON	10 5% 1/4W F
R706	1-249-414-11	CARBON	560 5% 1/4W F	△R768	1-249-393-11	CARBON	10 5% 1/4W F
R707	1-249-423-11	CARBON	3. 3K 5% 1/4W F	△R776	1-208-601-21	WIREWOUND	0. 1 10% 2W F
R708	1-249-411-11	CARBON	330 5% 1/4W	△R777	1-208-601-21	WIREWOUND	0. 1 10% 2W F
△R709	1-249-409-11	CARBON	220 5% 1/4W F	R778	1-249-417-11	CARBON	1K 5% 1/4W F
△R710	1-249-409-11	CARBON	220 5% 1/4W F	R779	1-249-431-11	CARBON	15K 5% 1/4W
R711	1-249-409-11	CARBON	220 5% 1/4W F	R781	1-249-440-11	CARBON	82K 5% 1/4W
R712	1-249-435-11	CARBON	33K 5% 1/4W	△R785	1-249-397-11	CARBON	22 5% 1/4W F
△R713	1-249-397-11	CARBON	22 5% 1/4W F	△R786	1-249-397-11	CARBON	22 5% 1/4W F
R714	1-249-428-11	CARBON	8. 2K 5% 1/4W F	R787	1-249-393-11	CARBON	10 5% 1/4W F
R715	1-249-409-11	CARBON	220 5% 1/4W F	R788	1-249-393-11	CARBON	10 5% 1/4W F
△R716	1-249-397-11	CARBON	22 5% 1/4W F	R794	1-249-412-11	CARBON	390 5% 1/4W F
△R717	1-249-393-11	CARBON	10 5% 1/4W F	R796	1-249-393-11	CARBON	10 5% 1/4W F (G)
△R718	1-249-393-11	CARBON	10 5% 1/4W F	R797	1-249-393-11	CARBON	10 5% 1/4W F (G)
△R726	1-208-601-21	WIREWOUND	0. 1 10% 2W F	R798	1-249-393-11	CARBON	10 5% 1/4W F (G)
△R727	1-208-601-21	WIREWOUND	0. 1 10% 2W F	R799	1-249-412-11	CARBON	390 5% 1/4W F
R728	1-249-417-11	CARBON	1K 5% 1/4W F	R801	1-249-415-11	CARBON	680 5% 1/4W F
R729	1-249-431-11	CARBON	15K 5% 1/4W	R804	1-247-895-00	CARBON	470K 5% 1/4W
R730	1-249-429-11	CARBON	10K 5% 1/4W	R851	1-249-415-11	CARBON	680 5% 1/4W F
R731	1-249-441-11	CARBON	100K 5% 1/4W	R854	1-247-895-00	CARBON	470K 5% 1/4W
R732	1-249-417-11	CARBON	1K 5% 1/4W F	△R950	1-215-908-00	METAL OXIDE	33 5% 3W F
R733	1-249-435-11	CARBON	33K 5% 1/4W	△R951	1-215-908-00	METAL OXIDE	33 5% 3W F
R734	1-249-427-11	CARBON	6. 8K 5% 1/4W F	△R952	1-247-743-11	CARBON	220 5% 1/2W F
△R735	1-249-397-11	CARBON	22 5% 1/4W F	R953	1-249-422-11	CARBON	2. 7K 5% 1/4W F
△R736	1-249-397-11	CARBON	22 5% 1/4W F	R954	1-249-423-11	CARBON	3. 3K 5% 1/4W F
R737	1-249-393-11	CARBON	10 5% 1/4W F	△R955	1-215-908-00	METAL OXIDE	33 5% 3W F
R738	1-249-393-11	CARBON	10 5% 1/4W F	△R956	1-249-405-11	CARBON	100 5% 1/4W F
R739	1-249-412-11	CARBON	390 5% 1/4W F	R957	1-249-410-11	CARBON	270 5% 1/4W F
R744	1-249-429-11	CARBON	10K 5% 1/4W	R958	1-249-410-11	CARBON	270 5% 1/4W F
△R745	1-249-399-11	CARBON	33 5% 1/4W F	R959	1-249-441-11	CARBON	100K 5% 1/4W
R746	1-249-393-11	CARBON	10 5% 1/4W F (G)	R960	1-249-429-11	CARBON	10K 5% 1/4W
R747	1-249-393-11	CARBON	10 5% 1/4W F (G)	△R963	1-249-395-11	CARBON	15 5% 1/4W F
R748	1-249-393-11	CARBON	10 5% 1/4W F (G)	R964	1-249-423-11	CARBON	3. 3K 5% 1/4W F
△R749	1-249-399-11	CARBON	33 5% 1/4W F	R965	1-249-437-11	CARBON	47K 5% 1/4W
R751	1-249-417-11	CARBON	1K 5% 1/4W F	R966	1-249-429-11	CARBON	10K 5% 1/4W
R752	1-249-434-11	CARBON	27K 5% 1/4W	R967	1-249-429-11	CARBON	10K 5% 1/4W
R753	1-249-435-11	CARBON	33K 5% 1/4W	R968	1-249-417-11	CARBON	1K 5% 1/4W F

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Replace only with part number specified.

**MAIN****POWER****STAND BY****SP SW-1****SP SW-2****SP SW-3**

Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
R969	1-249-429-11	CARBON 10K 5% 1/4W				< FUSE >	
R970	1-249-426-11	CARBON 5.6K 5% 1/4W		△F902	1-532-259-00	FUSE (T1.6A 250V)	
R971	1-249-417-11	CARBON 1K 5% 1/4W F		△F903	1-532-259-00	FUSE (T1.6A 250V)	
R972	1-249-426-11	CARBON 5.6K 5% 1/4W				< FUSE HOLDER >	
R973	1-247-830-11	CARBON 910 5% 1/4W		FH952	1-533-293-31	HOLDER, FUSE	
R974	1-249-425-11	CARBON 4.7K 5% 1/4W F				< RELAY >	
R999	1-249-397-11	CARBON 22 5% 1/4W F		RY901	1-515-720-11	RELAY	
		< VARIABLE RESISTOR >				< TRANSFORMER >	
RV1	1-223-240-11	RES, ADJ, CARBON 22K		△T902	1-450-358-11	TRANSFORMER, POWER	
		< RELAY >				*****	
RY401	1-515-614-11	RELAY		*	1-647-639-11	STAND BY BOARD	
RY701	1-515-533-11	RELAY				*****	
		< TERMINAL >				< CONNECTOR >	
TM1	1-537-488-11	TERMINAL BOARD (ANT) (ANTENNA)		* CNP107	1-565-295-11	PLUG, CONNECTOR 4P	
TM701	1-537-376-11	TERMINAL BOARD (SP) (SPEAKERS)				< SWITCH >	
		< TUNER >		S137	1-554-303-21	SWITCH, TACTILE (POWER)	
TU1	1-239-562-11	ENCAPSULATED COMPONENT (G)				*****	
TU1	1-239-611-11	ENCAPSULATED COMPONENT (AEP)		*	1-647-633-11	SP SW-1 BOARD	
		< VIBRATOR >				*****	
X1	1-579-900-21	VIBRATOR, CRYSTAL (4.3MHz)				< CONNECTOR >	
X2	1-577-358-21	VIBRATOR, CERAMIC (4MHz)		CNP702	1-691-173-11	CONNECTOR (BOARD TO BOARD) 3P	
		*****				< SWITCH >	
*	1-647-638-11	POWER BOARD		S701	1-571-485-11	SWITCH, PUSH (2 KEY) (SPEAKERS)	
		*****				*****	
△C901	1-161-744-00	CERAMIC 0.01uF 400V		*	1-647-634-11	SP SW-2 BOARD	
C902	1-161-741-00	CERAMIC 0.001uF 10% 400V (G)				*****	
C903	1-161-741-00	CERAMIC 0.001uF 10% 400V (G)				*****	
C911	1-164-159-11	CERAMIC 0.1uF 50V (G)		*	1-647-635-11	SP SW-3 BOARD	
C912	1-164-159-11	CERAMIC 0.1uF 50V (G)				*****	
		< CONNECTOR >				< CONNECTOR >	
* CNP901	1-564-321-00	PIN, CONNECTOR 2P		CNP701	1-573-109-11	PIN, CONNECTOR 15P	
* CNP902	1-580-230-11	PIN, CONNECTOR (PC BOARD) 3P				*****	
* CNP903	1-580-230-11	PIN, CONNECTOR (PC BOARD) 3P				< CONNECTOR >	
* CNP951	1-564-507-11	PLUG, CONNECTOR 4P					
		< DIODE >					
D901	8-719-987-63	DIODE 1N4148M					

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## TONE

## TRANSFORMER

## VOLUME

Ref. No.	Part No.	Description	Remark
*	1-647-632-11	TONE BOARD *****	
		< CAPACITOR >	
C501	1-130-489-00	MYLAR 0.033uF 5% 50V	
C502	1-124-250-00	ELECT 0.15uF 20% 50V	
C503	1-130-481-00	MYLAR 0.0068uF 5% 50V	
C504	1-137-441-91	FILM 0.027uF 5% 50V	
C551	1-130-489-00	MYLAR 0.033uF 5% 50V	
C552	1-124-250-00	ELECT 0.15uF 20% 50V	
C553	1-130-481-00	MYLAR 0.0068uF 5% 50V	
C554	1-137-441-91	FILM 0.027uF 5% 50V	
		< CONNECTOR >	
* CNP109	1-566-968-11	HOUSING, CONNECTOR(PC BOARD)6P	
		< RESISTOR >	
R501	1-249-429-11	CARBON 10K 5% 1/4W	
R502	1-249-422-11	CARBON 2.7K 5% 1/4W F	
R507	1-249-415-11	CARBON 680 5% 1/4W F	
R508	1-247-903-00	CARBON 1M 5% 1/4W	
R509	1-247-903-00	CARBON 1M 5% 1/4W	
R510	1-247-903-00	CARBON 1M 5% 1/4W	
R551	1-249-429-11	CARBON 10K 5% 1/4W	
R552	1-249-422-11	CARBON 2.7K 5% 1/4W F	
R557	1-249-415-11	CARBON 680 5% 1/4W F	
R558	1-247-903-00	CARBON 1M 5% 1/4W	
R559	1-247-903-00	CARBON 1M 5% 1/4W	
R560	1-247-903-00	CARBON 1M 5% 1/4W	
		< VARIABLE RESISTOR >	
RV401	1-223-362-11	RES, VAR, CARBON 100K/100K (BALANCE)	
RV402	1-223-363-11	RES, VAR, CARBON 125K/125K (TREBLE)	
RV403	1-238-965-21	RES, VAR, CARBON 100K/100K (BASS)	
*****			
*	1-647-631-11	TRANSFORMER BOARD *****	
		< CAPACITOR >	
△C921	1-164-159-11	CERAMIC 0.1uF 50V (G)	
△C922	1-164-159-11	CERAMIC 0.1uF 50V (G)	
		< CONNECTOR >	
* CNP955	1-564-243-00	PIN, CONNECTOR 6P	
*****			

Ref. No.	Part No.	Description	Remark
*	A-4360-428-A	VOLUME BOARD, COMPLETE *****	
		< CAPACITOR >	
C436	1-137-371-11	FILM 0.015uF 5% 50V	
C438	1-124-927-11	ELECT 4.7uF 20% 100V	
C439	1-124-927-11	ELECT 4.7uF 20% 100V	
C486	1-137-371-11	FILM 0.015uF 5% 50V	
C505	1-162-206-31	CERAMIC 20PF 5% 50V	
C506	1-124-925-11	ELECT 2.2uF 20% 100V	
C507	1-162-196-31	CERAMIC 5.6PF 10% 50V	
C508	1-123-382-00	ELECT 3.3uF 20% 100V	
C511	1-124-464-11	ELECT 0.22uF 20% 50V	
C513	1-123-382-00	ELECT 3.3uF 20% 100V	
C516	1-124-477-11	ELECT 47uF 20% 25V	
C517	1-124-477-11	ELECT 47uF 20% 25V	
C555	1-162-206-31	CERAMIC 20PF 5% 50V	
C556	1-124-925-11	ELECT 2.2uF 20% 100V	
C557	1-162-196-31	CERAMIC 5.6PF 10% 50V	
C558	1-123-382-00	ELECT 3.3uF 20% 100V	
C563	1-123-382-00	ELECT 3.3uF 20% 100V	
		< CONNECTOR >	
* CNP103	1-750-383-11	CONNECTOR, BOARD TO BOARD 11P	
* CNP401	1-566-971-11	PIN, CONNECTOR (PC BOARD) 6P	
* CNP402	1-566-972-11	PIN, CONNECTOR (PC BOARD) 7P	
		< DIODE >	
D404	8-719-987-63	DIODE 1N4148M	
		< IC >	
IC403	8-759-112-93	IC uPC4570HA-1	
		< TRANSISTOR >	
Q404	8-729-202-67	TRANSISTOR 2SK246-GR3	
Q454	8-729-202-67	TRANSISTOR 2SK246-GR3	
		< RESISTOR >	
R445	1-247-858-11	CARBON 13K 5% 1/4W	
R495	1-247-858-11	CARBON 13K 5% 1/4W	
R503	1-249-441-11	CARBON 100K 5% 1/4W	
R504	1-249-431-11	CARBON 15K 5% 1/4W	
R505	1-249-438-11	CARBON 56K 5% 1/4W	
R506	1-249-441-11	CARBON 100K 5% 1/4W	
R511	1-249-441-11	CARBON 100K 5% 1/4W	
R513	1-247-903-00	CARBON 1M 5% 1/4W	
R514	1-249-405-11	CARBON 100 5% 1/4W F	
R515	1-249-405-11	CARBON 100 5% 1/4W F	
R553	1-249-441-11	CARBON 100K 5% 1/4W	

The components identified by mark △ or dotted line with mark △ are critical for safety.  
Replace only with part number specified.



Ref.No.	Part No.	Description	Remark
R554	1-249-431-11	CARBON 15K 5% 1/4W	
R555	1-249-438-11	CARBON 56K 5% 1/4W	
R556	1-249-441-11	CARBON 100K 5% 1/4W	

## &lt; VARIABLE RESISTOR &gt;

RV701 1-241-850-11 RES, VAR, CARBON 100K/100K (VOLUME)

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## MISCELLANEOUS

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10 1-696-456-11 WIRE (FLAT TYPE) (31 CORE)  
 △63 1-575-651-11 CORD, POWER  
 65 1-750-854-11 CORD (WITH CONNECTOR)  
 △CNJ903 1-526-794-11 OUTLET, AC (AC OUTLET)  
 △F902 1-532-259-00 FUSE (T1.6A 250V)  
 △F903 1-532-259-00 FUSE (T1.6A 250V)  
 \* FH952 1-533-293-11 HOLDER, FUSE  
 FL300 1-517-141-11 INDICATOR TUBE, FLUORESCENT  
 △T901 1-450-363-11 TRANSFORMER, POWER

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## ACCESSORIES &amp; PACKING MATERIALS

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1-465-423-11 REMOTE COMMANDER (RM-S103)  
 1-501-374-11 ANTENNA, LOOP  
 1-501-594-11 ANTENNA (FM) (AEP)  
 2-181-754-01 COVER (MLY), BATTERY  
 3-756-537-11 MANUAL, INSTRUCTION  
 (ENGLISH, FRENCH, GERMAN, DUTCH) (AEP)  
 3-756-537-41 MANUAL, INSTRUCTION (GERMAN) (G)  
 3-756-537-51 MANUAL, INSTRUCTION  
 (SPANISH, SWEDISH, DANISH, FINNISH) (AEP2)  
 \* 4-952-676-01 CUSHION  
 \* 4-957-780-01 INDIVIDUAL CARTON

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## HARDWARE LIST

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#1 7-682-548-04 SCREW +BVTT 3X8 (S)  
 #2 7-682-548-09 SCREW +BVTT 3X8 (S)  
 #3 7-682-547-09 SCREW +BVTT 3X6 (S)  
 #4 7-682-560-04 SCREW +BVTT 4X6 (S)  
 #5 7-685-646-79 SCREW +BVTP 3X8 TYPE2 N-S  
 #6 7-685-647-79 SCREW +BVTP 3X10 TYPE2 IT-3  
 #7 7-621-849-00 SCREW, TAPPING

The components identified by mark  
 △ or dotted line with mark △ are  
 critical for safety.  
 Replace only with part number  
 specified.

